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Chronic CAD/Stable Ischemic Heart Disease

GENDER EFFECTS ON CORONARY MICROVASCULAR DYSFUNCTION IN PATIENTS WITH SUSPECTED CORONARY ARTERY DISEASE

ACC Oral Contributions
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Session Title: Sex, Scoring, Sadness, Statins, Stents and Surgery
Abstract Category: 2. Chronic CAD/Stable Ischemic Heart Disease: Clinical
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Background: Coronary microvascular dysfunction is prevalent and increases cardiac risk in women with ischemic-type symptoms. We aimed to determine if the coronary microvascular dysfunction is uniquely common in women compared to men and to identify risk factors for microvascular dysfunction.

Methods: We studied 404 consecutive patients (307 women, 97 men) referred for rest/stress Rb-82 PET for evaluation of suspected CAD, who had normal myocardial perfusion imaging and no evidence of coronary artery calcifications. Rest and stress myocardial blood flow (in ml/min/g, MBF) were calculated and used to compute CFR (stress/rest MBF).

Results: Rest MBF was higher in women than men after adjusting for differences in cardiac work (1.2 [IQR 0.8-1.7 vs 0.9 [IQR 0.7-1.2] ml/min/g, P<0.0001), as was peak stress MBF (2.4 [IQR 1.8-3.3] vs 1.9 [1.4-2.5] ml/min/g, P<0.0001). Impaired CFR (<2.0) was common in women (48%) and men (44%, P=0.56), especially among those referred for evaluation of chest pain (58% vs. 68%, respectively, P=0.25). However, median CFR was similar for women (2.05 [IQR 1.64-2.57]) and men (2.04 [IQR 1.58-2.49], P=0.98, Figure). The only univariate and multivariate predictors of impaired CFR were diabetes (OR 1.6, P=0.04) and tobacco use (OR 2.5, P=0.01).

Conclusions: Coronary microvascular dysfunction is common among symptomatic women and men without overt epicardial CAD. The frequency and magnitude of coronary microvascular dysfunction are similar in both genders.